

## Packaging cover and box

JC14 Rec'd PCT/PTO 18 JUL 2005

The invention relates to a cover for closing a container, at least consisting of an upper surface with one folding seam which divides the cover into two sides and gives a pivoting effect, and side edges with underside, method for producing such a  
5 cover, a container comprising an upper edge fitting onto the underside of such a cover, and a packaging comprising a container closed with such a cover.

Owing to the increase in world trade the time for transporting and storing goods for shipping is also increasing. It is therefore becoming increasingly important  
10 for the packing industry to supply means with which shock-sensitive and perishable products can be transported as safely as possible and kept fresh during stoppages.

In the transport and storage of fruit and vegetables, in particular small fruit such as for instance strawberries, cherries and berries, much use is made of containers which can be closed using a cover, wherein container and cover together form the  
15 packaging. It is always necessary here to provide for air circulation in some way. Holes are generally arranged for this purpose in the cover, and usually also in the bottom of the container or the box.

A number of drawbacks are associated with the use of such packages. Particularly the presence of holes in the cover causes regular problems such as  
20 admitting dirt into the packaging. In addition, the holes must be arranged per se in the cover, for instance by means of punching, and this has the effect of increasing costs.

The application of a folding seam in a cover fitting onto a supply container is described in the European patent application EP 579225 and in the British patent application GB 2108933, wherein the cover completely seals the supply container  
25 after being snapped onto the upper edge, without allowing a supply of air.

The present invention has for its object to provide a cover intended to close a container without the above stated drawbacks which entail the presence of holes, and wherein the supply of air is nevertheless ensured. The present invention therefore provides a cover of the type stated in the preamble wherein each of the two sides of  
30 the upper surface makes an angle of about 20-60° with the plane formed by the underside of the side edges. It will be apparent that both sides of the upper surface as well as the plane formed by the underside of the side edges intersect at the folding seam. Owing to the pivoting effect an opening is created at both ends of the folding

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both sides of the folding seam more preferably makes an angle at both positions where the pivoting effect ends of about 20-60° with the plane formed by the underside of the side edges. The ridge generally further runs roughly parallel to the upper surface.

5 In a particular preferred embodiment, this ridge is arranged at the greatest possible distance from the folding seam so that the upper surface runs as straight as possible when placed on the container for which the cover is intended. The opening which admits air here becomes as large as possible. The horizontal form of the cover also enables stacking of the containers on which the cover according to the invention is placed.

10 The side edges of the upper surface preferably comprise at least one snap closure, generally two or four snap closures, which are not situated where the folding seam gives the cover a pivoting effect. When the side edges comprise a ridge, the snap closure or snap closures are therefore then situated on the underside of the ridge, preferably on those sides on which the folding seam does not come out. However, the  
15 use of other types of closure to enable fastening of the cover according to the invention on a container also forms part of the scope of protection of the invention.

Although one folding seam will generally be sufficient to achieve the intended effect of being able to omit the holes in the cover, the embodiment with a plurality of folding seams also forms part of the invention. The folding seam is preferably situated  
20 transversely practically in the middle of the cover. The cover and the container on which the cover fits can further take any form, such as for instance a round or oval form, although it is recommended that the upper surface of the cover, and thereby the form of the container for which the cover is intended, is at least almost rectangular. According to a further preferred embodiment, the four corners of the rectangle are  
25 herein truncated, wherein an octagon is created, or rounded.

The cover with the matching container is generally manufactured from flexible material, such as thin plastic. Such a cover with container can be produced from a heated roll of foil of corresponding material and pressing thereof in a mould as according to the thermoforming process known to the person with ordinary skill in the  
30 art. According to another preferred embodiment of the invention, the cover according to the invention and the container associated therewith are manufactured from material which is non-flexible or little flexible, such as for instance hard plastic. In

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addition to the strength which the use of such material provides, a further advantage is that it can be produced using the known injection moulding process, wherein a mould is applied. Cover and container can of course also be made from other material such as a robust type of paper, for instance cardboard.

5           A packaging consisting of a container closed by a cover for closing such a container according to the present invention further forms part of the invention. Also forming part of the invention is a method for closing a container, wherein a cover suitable for closing such a container according to the present invention is snapped onto the container.

10           On the side edge of the cover there can be arranged an additional flap which, once the cover has been attached, serves to remove it easily once again from the container. In the case the cover takes the form of a rectangle with truncated sides, such a flap will preferably have a triangular form with a size such that the rectangular form is as it were restored.

15           The cover according to the invention, and the packaging consisting of such a cover and the container for which the cover is intended, wholly obviates the drawbacks of the known packaging in which holes can cause undesirable content in the packaging and upper surfaces which are not completely flat. The arranging of a folding seam, which leaves open a triangular space when the cover is applied,  
20           furthermore precludes holes having to be arranged separately, which would entail additional production costs.

The present invention will be further elucidated hereinbelow on the basis of the enclosed figures of a preferred embodiment, in which:

25           figure 1 shows a front view of cover (1) for closing, but here separately of container (2), wherein the upper surface of the cover comprises a folding seam (3), a side edge (4), a ridge (5) and a support bridge (6),

30           figure 2 shows a front view of cover (1) closing container (2), wherein the upper surface of the cover comprises a folding seam (3), a side edge (4), a ridge (5) and a support bridge (6), wherein the pivoting effect of the folding seam creates an opening (7) between the cover and the container,

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The figures are otherwise schematic and not drawn to scale. Some dimensions in particular may be exaggerated to a greater or lesser extent for the sake of clarity. Corresponding parts are designated in the figures as far as possible with the same reference numeral.

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The device as shown in figure 1 serves to illustrate a rectangular cover with sides which are truncated at the position of the support bridge. Folding seam (3) in the cover forms a pivot point, or in fact a pivot line. If the cover is snapped onto the container, the situation then arises as shown in figure 2, wherein reference numeral 7  
10 designates the opening enabling entry and exit of air. If one or more snap closures are applied, these are then generally situated under ridge 5, although then on the side of the cover and therefore not visible in figure 2. The resulting horizontal upper surface underlines the further advantage of the cover according to the invention, i.e. that stacking on the horizontally running flat surface is readily possible.

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In order to snap the cover onto the container, snap-on onto ridge (5) can take place easily at the position of the support bridge, wherein closing proceeds smoothly. Since the support bridge is pressed downward over the folded edge after closure, this part comes under a certain tension whereby the cover cannot be so easily removed from the container. Certainly when such a container with cover is applied for  
20 transport, a good closure offers significant advantages.

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It will be apparent to the skilled person that the inventive concept makes wide application possible and is certainly not limited to the given embodiment, which only serves by way of illustration. In the above stated embodiments the emphasis is placed on a cover without the disadvantages of holes, but with the possibility of supplying air  
25 and fitting onto a container intended for fruit and vegetables such as for instance strawberries, cherries, different types of berry, apricots, plums, peaches and tomatoes. However, the application of a cover with folding seam on a box, wherein an opening is created for the supply of air by the pivoting effect, for transporting and storing diverse products where fresh air is required, such as for instance mushrooms, also  
30 forms part of the invention.